

# La Crosse Technology Radio Controlled Analog Clock

## Quick set up instructions

*Welcome to the world of radio controlled timekeeping technology. We hope you will enjoy the convenience of never having to set your clock again and the confidence of knowing exactly what time it is.*

- **Insert 1 fresh AA, LR6  
1.5 volt ALKALINE battery**
- **Press button to select a time zone. THAT'S IT! During the night your clock will automatically set itself.**

*For a better understanding of how and why your clock works please continue reading.*

## Nothing is more precisely measured than time!

And nothing keeps track of time more precisely and trouble free than La Crosse Technology radio controlled clocks.

Since the beginning of time, man has been fascinated with the measurement of time and has devised more accurate machines to trap and measure time. Today, time is precisely measured in the United States by the most accurate clock in North America, the Atomic Clock of the US National Institute of Standards and Technology, Time and Frequency Division in Boulder, Colorado. A team of atomic physicists continually measures every second of every day to an accuracy of ten billionths of a second per day. These physicists have created an international standard, measuring a second as 9,192,631,770 vibrations of a Cesium 133 atom in a vacuum. This atomic clock regulates the WWVB radio transmitter located in Fort Collins, Colorado, where the exact time signal is continuously broadcast throughout the United States at 60 kHz to take advantage of stable longwave radio paths found in that frequency range. Radio waves at these low frequencies use the earth and the ionosphere as a wave-guide and follow the curvature of the earth for long distances.

The built in antenna system will receive the WWVB signal anywhere in North America within 2000 miles of Fort Collins where long-wave radio reception is undisturbed. A microprocessor activates the receiver and processes the time signal from Fort Collins overnight.

Through the radio signals, La Crosse Technology radio controlled clocks always keep precise time. The changeover from standard time to daylight savings time, and vice versa, takes place automatically with the same precision.

## Additional details

To set up your clock simply install one fresh AA, LR6 ALKALINE battery. Due to the nature of long wave radio signals it is normally not possible to receive a signal during the day so it is best to install the battery late in the evening. Select your time zone by pressing one of the four time zone buttons PT-Pacific Time, MT-Mountain Time, CT-Central Time, ET-Eastern Time. The time zone buttons may be pressed any time after installing the batteries. If multiple buttons are pressed the clock will set to the time zone selected last. If no time zone is selected the clock will default to Pacific Time. Another time zone can be selected during or after the clock has set itself. Your clock can only set itself to one of the four time zones stated above. For time zones outside of PT, MT, CT or ET you must manually set the time using the Manual Time set button on the back of the movement.

When the battery is installed the second hand will advance eight seconds (two seconds per step x four steps). The clock is now searching for a signal. For the initial setting it is recommended to stand the clock in an upright position near a window. Within five minutes the clock will either receive the WWVB signal and set itself to the exact time, or it will determine that the signal is not receivable at its current location and time of day. If a signal is not receivable it will fast-forward the hands to the 4, 8, or 12 o'clock position and search for WWVB each hour until a signal is received. If the time is manually set the clock will continue to periodically search for a signal and automatically reset the hands when the signal is received.

Select a location to place your radio controlled clock where it will be at least six feet away from a TV, computer, air conditioner or other household electrical appliances. The optimal location is near a window. Windows facing Colorado providing the best signal. The WWVB time signal will easily penetrate Masonry and wood framed buildings. WWVB will penetrate almost every residential building and most steel buildings if they have adequate windows. It is not possible, however, for WWVB to penetrate most indoor

shopping malls and rooms in the center of large office buildings that do not have windows. In buildings that WWVB cannot penetrate you may set the time using the manual time set button. When the clock is exposed to the WWVB signal it will automatically set the hands to the exact time.

La Crosse Technology clocks do not receive or process radio controlled time signals from Germany's DCF 77, Japan's J Ga AS, or England's MSFs atomically regulated transmitters. La Crosse Technology clocks can be manually set and used anywhere.

**For more information on the NIST and radio controlled time, see [www.boulder.nist.gov/timefreq/](http://www.boulder.nist.gov/timefreq/)**

## Troubleshooting

The wonderful advantage of owning a La Crosse Technology radio controlled clock is that it is virtually trouble free. If the clock receives a clear signal it will set itself perfectly. If it does not receive a signal consider the following:

**Battery** - The La Crosse Technology clock must have a fresh battery to receive and process the time signal.

**Location** - Try a different location, ideally near a window. It should be at least six feet from computers, TVs, air conditioners, other Radio-Controlled clocks and other electrical appliances that cause interference.

**Weather** - Electrical storms between you and Colorado during the night will interfere with the WWVB signal.

Although we cannot control the weather we can help you predict it (see [www.lacrossetechnology.com](http://www.lacrossetechnology.com)).

### Daylight Savings Time

The National Institute of Standards and Technology and WWVB encode a special DST "bit" in the WWVB transmission for DST. Your La Crosse Technology clock will read this information and automatically advance the hands one hour in the spring and eleven hours in the fall.

### Arizona and Indiana

If you live in an area that does not recognize DST you must press the (unmarked) DST button for one second to deactivate your clock's DST program. To reactivate the DST program simply press the DST button again for one second.

### Frequently Asked Questions

*Q. How long will the battery last?*

A. A good AA alkaline battery will last over one year. If your clock is located in an area with little interference where it can quickly receive a signal the battery will last much longer than one year.

*Q. Can a La Crosse Technology clock be used outdoors?*

A. Yes, but only in a dry environment and in a temperature range between 41 F and 131 F. The clock is NOT water-resistant.

*Q. Can the La Crosse Technology clock be wired to control timing circuits?*

A. No.

*Q. Why does the second hand move only once every two seconds, but it moves two seconds per step?*

A. When the battery drops below 1.25 volts the clock indicates that it is time to change the battery by advancing the second hand in two second steps. The operating voltage range is 1.25 to 1.75 volts.

## Warranty

La Crosse Technology warrants this clock to be free of any defect in workmanship or materials for a period of one year after the date of purchase. You should notify La Crosse Technology promptly in writing or by e-mail in the event of any defect covered by this warranty. When requesting warranty service you must provide evidence of the date of purchase.

This warranty does not cover the clock's inability to receive a signal due to interference, whatever may be the source of that interference. In addition, this warranty does not cover any defects resulting from improper use, unauthorized repairs, or faulty batteries.

In the event of a warranted problem please return the clock postage prepaid to the address below. La Crosse Technology will repair or replace your clock with the same or similar model free of charge.

LA CROSSE TECHNOLOGY WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS CLOCK.

This warranty gives you specific legal rights. You may also have other rights specific to your state. Some states do not allow the exclusion of consequential or incidental damages so the above exclusion of limitation may not apply to you.

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